WHAT IS CLAIMED IS:

1. A deformable mirror element for modulating an incident beam of light, the element comprising:

a substrate;

an elongate support extending along the substrate and projecting outwardly therefrom, and

a ribbon member, attached to the elongate support along a longitudinal portion of the ribbon member and extending transversely from the elongate support; and

at least one slit formed transversely in the ribbon member, the slit for dividing the ribbon member into at least two reflective wing portions, the wing portions being elastically deformable towards the substrate on application of an actuation force.

2. A deformable mirror element according to claim 1, wherein a natural frequency of vibration of the reflective wing portions is at least 500 KHz.

3. A deformable mirror element according to claim 1, wherein a natural frequency of vibration of the reflective wing portions is at least 1 MHz.

4. A deformable mirror element according to claim 1, comprising a first electrode and a second electrode, the first electrode located on the substrate and associated with at least one of the individual wing portions, the second electrode on the ribbon member, whereby the at least one individual wing portion is drawn toward the substrate by the application of a voltage between the first and second electrodes.

5. A deformable mirror element according to claim 4, comprising a plurality of first electrodes, each electrode being associated with an individual wing portion.

6. A deformable mirror element according to claim 4, wherein the substrate comprises first and second opposite surfaces, the elongate support projecting outwardly from the first surface and the first electrode deposited on the second surface.

7. A deformable mirror element according to claim 4, wherein the second electrode comprises a reflective layer on the ribbon.

8. A deformable mirror element according to claim 4, wherein the individual wing portion is adapted to snap-down into contact with the substrate under application of a voltage between the first and second electrodes that is higher than a snap-down voltage level.

9. A deformable mirror element according to claim 8, wherein the at least one of the individual wing portions is adapted to snap-down into contact with the substrate under application of a voltage sufficient to cause a deformation of the wing to move a free edge of the wing through a distance that is greater than one-third of the spacing between the electrodes.

10. A deformable mirror element according to claim 4, wherein the first electrode comprises a doped area of the substrate.

11. A deformable mirror element according to claim 4, wherein the second electrode comprises a doped area of the ribbon member.

12. A deformable mirror element according to claim 1, wherein at least the individual wing portions of the ribbon member comprise a conductive electrode.

13. A deformable mirror element according to claim 12, wherein the conductive electrode comprises a layer of electrically conductive material deposited on at least the individual wing portions of the ribbon member.

14. A deformable mirror element according to claim 13, wherein the conductive material is reflective at the wavelength of the incident light beam.

15. A deformable mirror element according to claim 1, wherein the elongate support has a height above the substrate of between 0.2 μm and 0.5 μm.

16. A deformable mirror element according to claim 1, used to modulate an incident light beam having a wavelength between 380 nm and 1054 nm.

17. A deformable mirror element according to claim 1, used to modulate an incident light beam having a wavelength between 790 nm and 980 nm.

18. A deformable mirror element according to claim 1, wherein the ribbon member comprises silicon nitride.

19. A deformable mirror element according to claim 18, wherein the ribbon member has a thickness of at least 0.2 um.

20. A deformable mirror element according to claim 1, wherein the ribbon member extends laterally from either side of the elongate support.

21. A light valve, comprising an array of deformable mirror elements according to claim 1 formed on a common substrate and an electrical connection to each of the deformable mirror elements for applying the actuation force thereto.

22. A light valve according to claim 21, wherein the array is arranged into groups of adjacent deformable mirror elements, each group sharing a common electrical connection and each group defining a individual grating light valve modulation channel.

23. A light valve according to claim 21, comprising means controlling a bias-voltage applied to each of the deformable mirror elements.

24. An apparatus for selectively deflecting a light beam comprising at least one row of spaced-apart deformable mirror elements according to claim 1, the mirror elements arranged with their elongate supports parallel to one another and extending substantially transversely to the row.

25. A method for modulating light, comprising:

providing a plurality of arrayed deformable mirror elements according to claim 1;

directing the light onto the wing portions to provide a plurality of reflected light beams;

elastically deforming selected ones of the wing portions by applying an actuation force thereto;

spatially filtering the reflected light from the wing portions to provide a plurality of modulated light beams.

26. A method according to claim 25, wherein the individual wing portions are curved away from the substrate when no actuation force is applied and the method comprises flattening out at least some of the wing portions by applying a pre-determined actuation force thereto, the degree of flattening selected to provide the plurality of modulated beams with a substantially uniform intensity.

27. A method according to claim 26, wherein the application of an actuation force greater than the pre-determined actuation force causes the individual wing portion to deflect further toward the substrate into an actuated configuration.

28. A method according to claim 26, wherein the force applied in the actuated configuration is sufficiently large to deform the individual wing portion so that at least an edge thereof snaps down into contact with the substrate.